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Philosophy and Theology: Artificial Gametes

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Philosophy and Theology

How could technology change parenthood in the twenty-first century? In vitro fertilization and surrogate motherhood in the twentieth century created the need to distinguish different senses of parenthood: genetic parenthood—the creating of a child by one's own sperm or eggs; gestational parenthood—the bearing of a developing human being in utero; and social parenthood—the rearing of a child to adulthood. With the advent of cloning, an individual person could become a genetic parent not only without the help of another person but even without consent and without having sex. Cloning can take cells from a toothbrush used by LaBron James at the Ritz-Carlton and from it make his identical much younger twin. What other changes are on the horizon?

Scientists seek to create artificial gametes from any human cell. If successful, they could make sperm from Jennifer Anniston's hair or ova from George Clooney's fingernail. Researchers have already created artificial gametes in mice from their skin cells and used these gametes to produce fertile offspring.[1] Similar transformations may be possible in human beings. Before science fiction becomes science fact, we might want to consider the ethical ramifications of such innovations.

Is it fair to spend vast sums of money to benefit the small number of people who want to use artificial gametes? It seems that this money could be better used to provide basic health care for many people or to fund research for cures of deadly diseases such as cancer or AIDS.[2] Anyone who advocates an ethics of maximizing human well-being cannot consistently condone spending money on artificial gametes when innumerable people lack healthy food and clean water.

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[1] Daniela Cutas et al., "Artificial Gametes: Perspectives of Geneticists, Ethicists, and Representatives of Potential Users," *Medicine, Health Care, and Philosophy* 17.3 (August 2014): 343.

[2] Ibid.

Let us also, for the sake of argument, set aside concerns about in vitro fertilization.[3] What other ethical considerations does this new technology raise? To create artificial gametes so as to study and ultimately alleviate the causes of infertility is not morally problematic in itself. To use artificial gametes for the production of new human beings raises weighty ethical issues. The trouble, in part, is that the first project leads almost ineluctably to the second: "If you want to understand, you have to create it. If you want to understand how good an egg [created artificially] is, you have to fertilise."[4] These embryonic human beings will either be killed in experimentation or brought to birth. Obviously, if all human beings deserve basic rights, then these killings are impermissible. But using artificial gametes to create a child for birth is not itself without serious problems.

Additional ethical concerns come to mind. People created by artificial gametes may very well have increased likelihood of mental and physical disabilities. We simply do not know what the long-term effects of such experimentation might be. We do not even know what the short-term effects will be, though we might be able, through animal testing, to have a fairly good idea. Even if extensive tests are conducted on non-human animals first, experimentation on human beings without their consent will take place if artificial gametes are used for reproduction. Such experimentation wrongs these human beings even if it does not harm them.

One response to such concerns is to note that without artificial gametes some human beings simply would not exist.[5] The choice is not between such persons coming into existence through normal sexual intercourse and coming into existence via artificial gametes. The choice is between existing via artificial gametes or not existing at all. So long as the persons created prefer life over non-existence, they have not been harmed or wronged even if their lives are much worse off than other human beings.[6] Indeed, the use of artificial gametes could be seen as experimentation for the benefit of the child brought into existence.

In coming into being, a human being is neither benefited nor harmed, at least if benefited means being made "better off" and harmed means being made "worse off." Better off and worse off are comparative terms. Unless we believe in something like preexisting souls, prior to a human being's coming into existence there is no state of well-being to which to compare. But a human being is wronged not just when made "worse off," which is impossible in the case we are considering, but also when someone does not have that to which they are entitled or that which human beings can

[3] For more on this point, see Janet E. Smith and Christopher Kaczor, *Life Issues, Medical Choices: Questions and Answers for Catholics* (Cincinnati, OH: Servant Books, 2007), Chapter 3.

[4] Cutas et al., "Artificial Gametes," 341.

[5] César Palacios-González, John Harris, and Giuseppe Testa, "Multiplex Parenting: IVG and the Generations to Come," *Journal of Medical Ethics* 40.11 (2014): 754.

[6] In his book *Reasons and Persons* (Oxford, UK: Clarendon Press, 1984), Derek Parfit began the discussion of the cases in which one must choose whether to create a person who either exists in a handicapped state or does not exist at all, which gave rise to a vast literature about the non-identity problem.

reasonably expect.[7] If the use of artificial gametes leads to disability in the children created, these children will have been wronged in not receiving that to which they were entitled and could reasonably expect, namely a normal likelihood of health.

Anna Smajdor and Daniela Cutas note other ethical issues raised by artificial gametes.[8] When you shake hands, some stray cells are exchanged. Given the possibility of artificial gametes, these cells could be used to create sperm and eggs genetically like your sperm or eggs. In this way, you could become the genetic parent of a child without your knowledge or consent. Innumerable people would love to have children genetically related to NFL quarterbacks, Grammy winners, or cover girl fashionistas. Given technological advances, genetic parenthood could be achieved with virtually anyone with whom one had the slightest contact. Smajdor and Cutas point out that laws in most countries currently view genetic parenthood as the key to deciding who is or is not the legal father of a child—with responsibility for child support payments.

In their article, "Artificial Gametes and the Ethics of Unwitting Parenthood," Smajdor and Cutas take up two central questions: "First, if unwitting genetic parenthood is feasible, is it acceptable to impose financial parental responsibility on the basis of genetic evidence alone? Second, are people harmed if—without their consent—children are born who are genetically related to them?"[9] In order to address these questions, they consider a range of actual cases in which parenthood is nonvoluntary. One case involves a divorced couple fighting over their IVF embryos. She wants to bring them to term; he does not want to become a father. In another case, a woman has sex with a passed-out man and gets pregnant. We could add the case of statutory rape in which an eighth-grade boy, obviously too young to legally consent to sex, impregnates a woman. Should the male in each of these cases be held financially and morally responsible for the child?

These cases are not all alike. The first case—a married couple fighting over IVF embryos—does not involve making someone a parent against his will. Assuming it is a typical case of IVF, the man donated sperm precisely in order to conceive human embryos. Once a human being is conceived, the man has fathered a child. He is already a genetic father. Ordinary discourse reflects the idea that fatherhood begins prior to birth. Medical personnel ask pregnant women, "Who is the father?" not "Who is going to be the father?" The question is asked in the present tense because the child in utero or in vitro has a father. Likewise, once conception takes place, the woman whose egg gave rise to the new human being is the genetic mother. If the embryo is inside a woman's body, she is also the gestational mother. Fights over IVF embryos are not about making someone a parent, but about making someone take responsibility for being a genetic parent.

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[7] Ronald M. Green, *The Human Embryo Research Debates: Bioethics in the Vortex of Controversy* (Oxford, UK: Oxford University Press, 2001), 126–127.

[8] Anna Smajdor and Daniela Cutas, "Artificial Gametes and the Ethics of Unwitting Parenthood," *Journal of Medical Ethics* 40.11 (November 2014): 748–751.

[9] Ibid., 749.

Is being a genetic parent sufficient for making someone take responsibility for a child? Parenthood, at least in the genetic and gestational senses, can be non-voluntary. A woman who finds herself pregnant by rape is a genetic and gestational mother. A man could also find himself non-voluntarily a parent if he fathers a child without his consent (say, in sexual intercourse in which he was chemically incapacitated by someone or too young to consent). Do such persons who became parents against their will have special responsibilities for their biological children?

Intuitions on this point may vary. On the one hand, the well-being of the child must be a concern. Vulnerable young children need support. In some cases, we have special ethical responsibilities for those who are related to us (such as to parents or to siblings) even though we did not choose to have these relationships. Fathers and mothers have special obligations to support their own children.

On the other hand, in the case of the sexual abuse of a minor who is male or with a man who is passed out (let us assume he was involuntarily drugged for this purpose), it does seem unfair to force him to pay child support. No one would force a woman who was raped to pay child support to the rapist raising their biological child.

But is it not by parity of reasoning also unfair to force a woman to continue gestating the child in a case of rape? In this case, the mother alone can support her child until he or she is old enough to be born. In a similar way, if the biological father alone is the only one in the position to support his child until he or she was old enough to be cared for by others, then he too has an obligation to care for the child.

Here is another case raised by Smajdor and Cutas: "Let us suppose that a man—Peter—strongly believes the world is overpopulated and therefore chooses not to reproduce. Someone [Sally] collects Peter's discarded skin cells in order to produce gametes and have a child, without his knowledge or consent. Has Peter been harmed? And if so, what if any action is he justified in taking? Can he destroy the gametes, embryos or offspring that have been created without his consent?"[10]

If all human beings have equal basic rights, Peter may not licitly destroy his offspring.[11] Whether Peter's child is in the infant, fetal, or embryonic stage of human development is irrelevant. Could Peter destroy his gametes prior to the creation of another human being? On this question, it seems like the answer would be affirmative because he may prevent the unauthorized use of what is his, and his sperm are his.

Did Sally harm Peter in producing gametes from his cells in order to create his biological child? Peter is not physically harmed, since the cells Sally used were discarded and do not impede his physical well-being in any way. Sally might harm Peter psychologically, if Peter suffers anxiety or trauma after learning that he has a son or daughter. However, if Sally successfully conceals the existence of Peter's child from him, Peter would not suffer psychological harm from her action. Did Sally

[10] Smajdor and Cutas, "Artificial Gametes and the Ethics of Unwitting Parenthood," 750.

[11] For an updated defense of this view, see Christopher Kaczor, *The Ethics of Abortion: Women's Rights, Human Life, and the Question of Justice*, 2nd ed. (New York: Routledge, 2015).

harm Peter spiritually? It is hard to see how this could happen, at least if we define spiritual harms as whatever undermines love for God and love for neighbor as self. Although one person can tempt another to sin, spiritual harms as sins are always self-inflicted wounds. Although she did not harm him physically, psychologically, or spiritually, Sally wronged Peter inasmuch as she used parts from Peter's body in a morally significant way without his consent.

If it is wrong to use someone else's body or body parts without consent, does this give rise to the violinist case for abortion? In an unwanted pregnancy, the woman's body is used in a morally significant way without her consent. If Peter is wronged in becoming a parent against his will, so too a woman is wronged if forced to become a parent against her will.

A woman is certainly wronged if an agent impregnates her against her will, say through rape or through the implantation of an embryo in her uterus. It is important to remember that the voluntary agent who impregnates her wrongs her, not her child in utero. By contrast, the human being in utero is not an agent who is voluntarily making use of his or her mother's body against her will. Likewise, an infant might harm someone (say, by disrupting a person's sleep), but an infant cannot wrong anyone.

How then do we deal with allotting the responsibilities of parenthood in the scenarios envisioned by Smajdor and Cutas? One way out of the thicket is to put the ethical responsibility of "parenthood" on those who knowingly and willingly created the new human beings, namely the laboratory technicians and those who brought the laboratory technicians the genetic material. They are the ones who generate new human life, so they bear responsibility for the human beings that they produce.

There is a serious problem with this proposal, namely that it could defuse parenthood too widely. Part of the advantage of having two parents is that the responsibilities of parenthood are shared, since it is difficult if not impossible for one person to provide all that a child needs physically, financially, psychologically, and spiritually. But having just *two* parents focuses the responsibility. Ten, twenty, or even more lab technicians may create human beings through artificial gametes working with genetic material secured from ten, twenty, or even more people. Suppose a "reproductive team" of forty people worked to make a child. It is impractical that all forty can reasonably share joint responsibility for the child. Just as a public park owned by everyone tends to receive less detailed attention than a private garden, so too would a child whose parents are the reproductive team likely be no one's child. What belongs to everyone belongs to no one in particular, and children need particular people deeply invested in their well-being.

The scenario of more than two people becoming genetic parents to one child is explicitly envisioned and endorsed by César Palacios-González, John Harris, and Giuseppe Testa in their article, "Multiplex Parenting: IVG and the Generations to Come." They explain,

> Imagine that four people in a relationship want to parent a child while being all genetically related to her. IVG would enable the following scenario: first, two embryos would be generated from either couple through IVF with either naturally or in vitro generated gametes. hESC lines would be then established from both embryos and differentiated into IVG to be used in a second round of

IVF. The resulting embryo would be genetically related to all four prospective parents, who would technically be the child's genetic grandparents.[12]

The same technology that would enable four people to become genetic parents to a child could also enable fourteen, forty, or four hundred to become genetic parents to a single child. Palacios-González, Harris, and Testa note, "If we find it morally unproblematic that people who cannot achieve natural reproduction rely on assisted reproduction to have genetically related kin then we find no reason why this should not hold also for non-couple partnerships for whom simultaneous genetic kinship is currently prevented, given that they will provide the necessary parenting and care for the resulting children."[13] We should deny the antecedent rather than embrace the absurd.

Another bonus, on the view advocated by Palacios-González, Harris, and Testa, is that artificial gametes would facilitate choosing "in a direct to consumer setting" among an "unimaginable variety of potential children." It is easy to imagine such a future.[14]

"Would you like your child between 6'1 and 6'2?" asks the smiling salesperson. She continues with a friendly lilt in her voice, "We have a blond haired, blue eyed one available with a 135 IQ and athletic potential for varsity high school basketball. Would this work for you, sir?"

"Well, I'm not sure. Let me run this by the others," sighs the reproductive committee chairperson. "Some of my potential co-parents were hoping for a little more intelligence, even if we have to downgrade the athletic ability. How much would it be to create a few hundred more embryos and try again?" She frowns. He exhales and adds, "I might have enough votes to make this option work for us, but I'll have to sell it to some members of the parental co-op. How good-looking will this product, I mean, child be? We don't have to have supermodel looks, which I know cost extra, but we need at least GAP model attractiveness." This brave new world, even if populated with only beautiful people, is an ugly world in which the gift of a child becomes a consumer product for committee evaluation and consumption.

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[12] Palacios-González et al., "Multiplex Parenting," 756.

[13] Ibid., 758.

[14] Jürgan Habermas shares my worries that the eugenic use of artificial gametes and the embryo selection that follows it may undermine presumptions about human equality. See his book *The Future of Human Nature* (London: Polity Press, 2003).